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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/815,385   | 04/01/2004  | Hossein Eslambolchi  | 2002-0524CON        | 7594             |
| 26652  | 7590        | 04/21/2006           | EXAMINER            |                  |
| AT&T CORP.<br>ROOM 2A207<br>ONE AT&T WAY<br>BEDMINSTER, NJ 07921 |             |                      | NGUYEN, JIMMY       |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2829                |                  |

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

31

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/815,385 | <b>Applicant(s)</b><br>ESLAMBOLCHI ET AL. |  |
|                              | <b>Examiner</b><br>Jimmy Nguyen      | <b>Art Unit</b><br>2829                   |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 20 - 46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20 - 46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### **Response to Argument**

The examiner acknowledges the terminal disclaimer filed 1/30/06, however upon further search the examiner is making new ground of rejection as follow.

### **Claims Status**

The examiner acknowledges claims 1 –19 have been canceled in the preliminary amendment. Claims 20 – 46 are pending.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 20 – 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al (US 2002/0171433) in view of Mashikian et al (US 5,530,364)

**As to claim 20**, Watanabe et al disclose (figs 4, 6, and 13) an apparatus for locating an insulation fault on a cable including a conductor carrying a current, the cable being at least partially submerged in a liquid, the apparatus comprising:

at least one voltage probe (600) adapted to be positioned adjacent the cable (50) and displaced along the cable (50) whereby the liquid conducts at least a portion of the current between the probe and an insulation fault ( measuring the voltage between the cable and ground) on the cable (50);

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However, Watanabe et al are silent on the

a voltage comparator electrically connected to the at least one voltage probe for detecting an insulation fault when the voltage probe is positioned adjacent the fault.

On the other hand, Mashikian et al teach a voltage comparator (104, 110, fig 13) electrically connected to the at least one voltage probe (30, 32) for detecting an insulation fault when the voltage probe is positioned adjacent the fault.

It would have been obvious to one having an ordinary skill in the art at the time of the invention was made to modify the teaching of Watanabe et al and use comparator as taught by Mashikian et al for the purpose of comparing the detected signal.

**As to claim 21**, Mashikian et al disclose (fig 6) the apparatus of claim 20, further comprising a body holding the at least one voltage probe (50) the body being adapted to at least partially surround a transverse section of the cable (10).

**As to claim 22**, Mashikian et al disclose (figs 4, 6) the apparatus of claim 21, wherein the at least one voltage probe comprises a plurality of voltage probes (30, 32) angularly spaced around the transverse section ( fig 6) of the cable (10).

**As to claim 23**, Mashikian et al disclose (figs 4, 6) the apparatus of claim 21, wherein the conductor (10) is an optical fiber cable having a cable locating conductor, and the body is adapted to at least partially surround a transverse section of the fiber optic cable.

**As to claim 24**, Mashikian et al disclose (figs 4, 6) the apparatus of claim 20, wherein the at least one voltage probe (30, 32) presents a conductive surface facing the cable (10).

**As to claim 25**, Mashikian et al disclose (figs 4, 6) the apparatus of claim 20, wherein the liquid is ground water

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 26 - 32, 38, 40, 42 – 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al (US 2002/0171433) in view of Mashikian et al (US 5,530,364) and further in view of the APA (admitted prior art, back ground of the invention).

**As to claims 26, 38, 42**, Watanabe et al and Mashikian et al disclose (figs 4, 6, and 13) at least one voltage probe (30, 32) adapted to be positioned adjacent the cable (10) and displaced along the cable and a voltage comparator (104, 110) electrically

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connected to the at least one voltage probe for detecting an insulation fault when the voltage probe is positioned adjacent the fault.

However, Watanabe et al and Mashikian et al disclose are silent on the voltage source level is 80 and 100 volts to the conductor

On the other hand, the APA (page 3, line 1 of the back ground of the invention) disclose the voltage source level is 80 and 100 volts to the conductor.

It would have been obvious to one having an ordinary skill in the art at the time of the invention was made to supply 80 – 100 volts as a voltage supplier to the cable testing system for the purpose of the sending a strong signal to the cable for easier fault detection.

**As to claims 27, 29, 43, 45,** The APA (page 3 line 1 of the back ground of the invention) disclose the voltage source is AC and DC (page 3 paragraph 4).

**As to claims 28, 44,** The APA (page 3 line 2 of the back ground of the invention) disclose the AC cable locating tone is between approximately 220 and 440 Hz.

**As to claim 30,** Mashikian et al disclose (figs 4, 6, and 13) a body holding the at least one voltage probe (30, 32) , the body being adapted to at least partially surround a transverse section of the cable (10).

**As to claim 31**, Mashikian et al disclose (figs 4, 6) the apparatus of claim 21, wherein the at least one voltage probe comprises a plurality of voltage probes (30, 32) angularly spaced around the transverse section ( fig 6) of the cable (10).

**As to claims 40, 46, 32**, Mashikian et al disclose (figs 4, 6, and 13) disclose the cable (10) is a fiber optic cable and the current is a cable locating current.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Nguyen whose telephone number is 571 – 272 - 1965. The examiner can normally be reached on M-F from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ramtez Nestor, can be reached on 571 – 272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jimmy Nguyen

4/14/06

  
VINH NGUYEN  
PRIMARY EXAMINER  
A.U. 2829  
04/17/06